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Amendment to the Claims

In the Claims:

Please cancel Claims 48, 83, and 89.

Please amend Claims 49-55, 76, 84-87, 90, 113, 114, and 117 as follows:

1. (Previously Presented) A stacked plate reactor for reacting one chemical reactant with at least one other chemical reactant to form a chemical product, said stacked plate reactor comprising a plurality of simple plates, stacked in layers, each simple plate having at least one opening that extends therethrough, an opening in each simple plate overlapping at least one other opening in an adjacent simple plate, said simple plates, when thus stacked in layers, defining:

(a) a fluid path for each different chemical reactant;

(b) a fluid path for a chemical product; and

(c) a plurality of individual reaction units providing internal parallelization of fluid flow through the stacked plate reactor, thereby increasing a quantity of chemical product that can be produced by said stacked plate reactor per unit time, each reaction unit including:

(i) a mixing and reaction chamber;

(ii) a reactant fluid path for each reactant, each reactant fluid path being in fluid communication with said mixing and reaction chamber; and

(iii) a bypass fluid path for each reactant, each bypass fluid path being in fluid communication with a different individual reaction unit, such that a reactant flowing in a bypass fluid path in a reaction unit does not also flow into a mixing and reaction chamber in said reaction unit.

2. (Original) The stacked plate reactor of Claim 1, further comprising at least one additional plate having no openings, said at least one additional plate being disposed to seal at least one of a top, a bottom, and a side of the stacked plate reactor

3. (Canceled)

4. (Canceled)

5. (Previously Presented) The stacked plate reactor of Claim 1, wherein a plurality of individual reaction units are irreversibly joined together to form a reactor stack.

6. (Original) The stacked plate reactor of Claim 5, wherein a plurality of individual reactor stacks are reversibly joined together to form a chemical plant.

7. (Previously Presented) The stacked plate reactor of Claim 1, further comprising means for equalizing a residence time distribution within said stacked plate reactor.

8. (Original) The stacked plate reactor of Claim 7, wherein said means for equalizing the residence time distribution within said stacked plate reactor comprises a bifurcated opening in at least one of the

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